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1. A system for measuring distances, the system comprising:

a first conductive element conveying a first electromagnetic signal;

a second conductive element conveying a second electromagnetic signal based on the first electromagnetic signal;

a coupler positioned at a point of interest for coupling the second electromagnetic signal to the second conductive element in response to a change in capacitance associated with the first conductive element caused by the first electromagnetic signal traversing a part of the first conductive element substantially adjacent to the coupler; and

a processor determining a distance associated with the point of interest based at least in part on a time delay between the first and second electromagnetic signals.

2. The system of claim 1 wherein the first electromagnetic signal exhibits an ultra-wideband frequency.

3. The system of claim 1 further comprising a transmitter for forming the first electromagnetic signal.

4. The system of claim 1 further comprising a receiver for detecting the time delay between the first and second electromagnetic signals.

5. The system of claim 4 wherein the receiver includes an equivalent time sampling circuit.

6. The system of claim 1 wherein the first and second conductive elements form a parallel conductor transmission line structure.

7. The system of claim 1 wherein the first and second conductive elements are flexible.

8. The system of claim 1 wherein the first and second conductive elements exhibit quadrilateral cross-sections.

9. The system of claim 1 wherein the first and second conductive elements exhibit substantially identical cross-sections.

10. The system of claim 1 wherein the coupler exhibits a length corresponding to at least one-quarter of a propagation velocity pulse length of the first electromagnetic signal.

11. The system of claim 1 further comprising a supporting material for slidably receiving the coupler in a channel defined therein, the supporting material maintaining a consistent displacement between the coupler and the first and second conductive elements.

12. The system of claim 1 wherein the distance determined by the processor corresponds to a dimension associated with an object.

13. The system of claim 1 wherein the distance determined by the processor corresponds to a displacement between a plurality of objects.

14. The system of claim 1 wherein the distance determined by the processor corresponds to an angular orientation.

15. The system of claim 1 wherein the distance determined by the processor corresponds to a degree of pressure.

16. A method of measuring distances, the method comprising:

transmitting a first electromagnetic signal on a first conductive element;

receiving a second electromagnetic signal based on the first electromagnetic signal at a second conductive element, the second electromagnetic signal being coupled to the second conductive element in response to a change in capacitance of the first conductive element caused by the first electromagnetic signal traversing a part of the first conductive element substantially adjacent to a coupler, wherein the coupler is positioned at a point of interest; and

determining a distance associated with the point of interest based at least in part on a time delay between the first and second electromagnetic signals.

17. The method of claim 16 wherein the distance associated with the point of interest corresponds to a dimension associated with an object.

18. The method of claim 16 wherein the distance associated with the point of interest corresponds to a displacement between a plurality of objects.

19. The method of claim 16 wherein the distance associated with the point of interest corresponds to an angular orientation.

20. The method of claim 16 wherein the distance associated with the point of interest corresponds to a degree of pressure.